MPSA44
MPSA45

SILICON
HIGH VOLTAGE
NPN TRANSISTORS

TO-92 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR MPSA44 and MPSA45 are silicon NPN transistors designed for high voltage applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**	**MPSA44**	**MPSA45**	**UNITS**
Collector-Base Voltage	V_{CBO}	500	400	V
Collector-Emitter Voltage	V_{CEO}	400	350	V
Emitter-Base Voltage	V_{EBO}	6.0		V
Continuous Collector Current	I_C	300		mA
Power Dissipation	P_D	625		mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150		°C
Thermal Resistance	Θ_{JA}	200		°C/W

ELECTRICAL CHARACTERISTICS: (T_A=25°C)		**MPSA44**		**MPSA45**		
SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**MIN**	**MAX**	**UNITS**
I_{CBO}	V_{CB}=400V	-	100	-	-	nA
I_{CBO}	V_{CB}=320V	-	-	-	100	nA
I_{CES}	V_{CE}=400V	-	500	-	-	nA
I_{CES}	V_{CE}=320V	-	-	-	500	nA
I_{EBO}	V_{EB}=4.0V	-	100	-	100	nA
BV_{CBO}	I_C=100μA	500	-	400	-	V
BV_{CES}	I_C=100μA	500	-	400	-	V
BV_{CEO}	I_C=1.0mA	400	-	350	-	V
BV_{EBO}	I_E=10μA	6.0	-	6.0	-	V
$V_{CE(SAT)}$	I_C=1.0mA, I_B=0.1mA	-	0.40	-	0.40	V
$V_{CE(SAT)}$	I_C=10mA, I_B=1.0mA	-	0.50	-	0.50	V
$V_{CE(SAT)}$	I_C=50mA, I_B=5.0mA	-	0.75	-	0.75	V
$V_{BE(SAT)}$	I_C=10mA, I_B=1.0mA	-	0.75	-	0.75	V
h_{FE}	V_{CE}=10V, I_C=1.0mA	40	-	40	-	
h_{FE}	V_{CE}=10V, I_C=10mA	50	200	50	200	
h_{FE}	V_{CE}=10V, I_C=50mA	45	-	45	-	
h_{FE}	V_{CE}=10V, I_C=100mA	40	-	40	-	
f_T	V_{CE}=10V, I_C=10mA, f=10MHz	20	-	20	-	MHz
C_{ob}	V_{CB}=20V, I_E=0, f=1.0MHz	-	6.0	-	6.0	pF
C_{ib}	V_{EB}=0.5V, I_C=0, f=1.0MHz	-	110	-	110	pF

R1 (18-March 2014)

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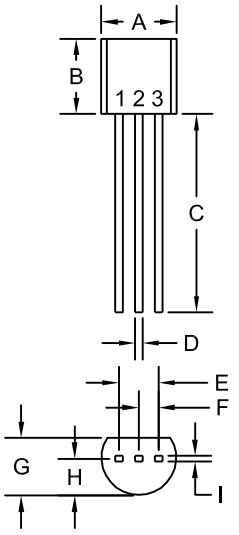
TO-92 CASE - MECHANICAL OUTLINE



R1

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

LEAD CODE:
1) Emitter
2) Base
3) Collector

MARKING:
FULL PART NUMBER

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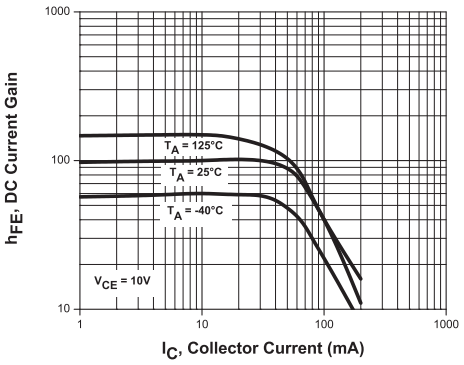
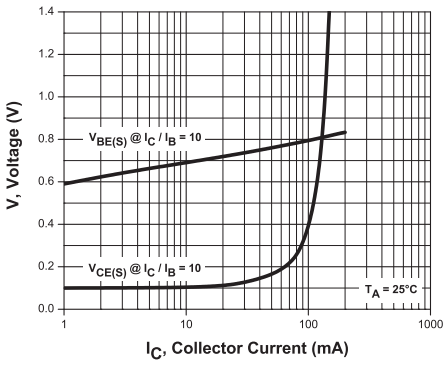
TYPICAL ELECTRICAL CHARACTERISTICS

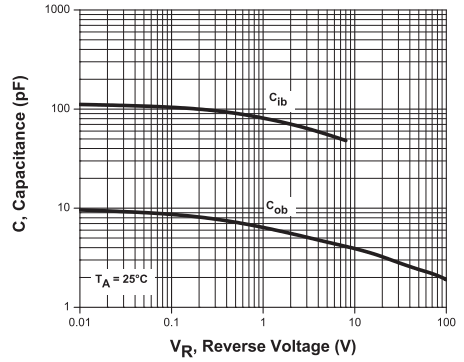
DC Current Gain



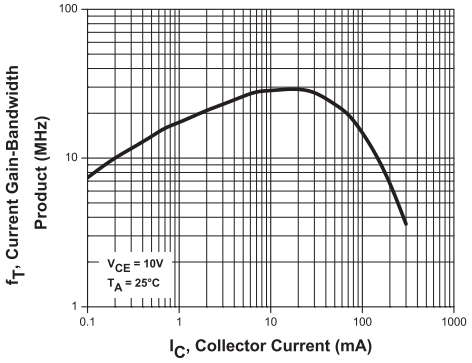
"ON" Voltage



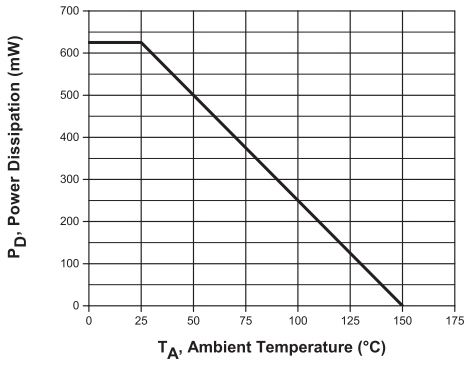
Capacitance



Current Gain-Bandwidth Product



Power Derating



R1 (18-March 2014)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

CONTACT US

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